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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,413	09/24/2001	Keizo Hirose	33082M102	5643

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EXAMINER

BALSIS, SHAY L

ART UNIT PAPER NUMBER

1744

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,413

Applicant(s)

HIROSE ET AL.

Examiner

Shay L Balsis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7,8,10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,8,10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Bolton et al. (USPN 6131233).

Bolton teaches a mop comprising a plurality of flexible thready members (3). The members each have a hollow channel and are water permeable. Each member has a number of channels extending from the hollow channel since water permeable materials are not solid but have microscopic openings from one side to the other. The cleaning tool is capable of rotating against a substrate.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Farquhar (USPN 1930044).

Farquhar teaches a cleaning mitt comprising a plurality of flexible thready members (21). The members each have a hollow channel and are water permeable. Each member has a number of channels extending from the hollow channel since water permeable materials are not solid but have microscopic openings from one side to the other. The cleaning tool is capable of rotating against a substrate.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Belan (USPN 4958596).

Belan teaches a cleaning tool comprising members (36) in a bundle. Each member has a hollow channel (39) with a number of channels extending from the hollow channel (49). The members are made of a water-repellent material. Additionally, the members are considered to be flexible. Belan does not clearly state whether the bristles are rigid or not. It is assumed that they are flexible since hairbrush bristles are made to be flexible to as to prevent pulling and tangling of the hair.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolton et al. in view of Reynolds (USPN 4066366).

Bolton teaches all the essential elements of the claimed invention, including that the members extend straight and are tied up in a bundle and mounted on a body (2) for holding the member. Bolton however fails to teach that the body has a cleaning liquid passage for supplying cleaning liquid to the members and that the brush members comprise short and long elements.

With regards to claim 8, Reynolds teaches a mop that is attached to a water supply. It would have been obvious to one of ordinary skill in the art at the time the invention was made have a water supply to Bolton's invention so that the mop would have a constant supply of clean

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water, without stopping the process of cleaning. With Bolton's current invention, when more water is needed the cleaning process would stop and the mop would have to be dunked in a bucket of cleaning water. That bucket of cleaning water would eventually become dirty and then the mop would be using dirty water to clean the substrate.

With regards to claim 10, Bolton in view of Reynolds teach all the essential elements of the claimed invention however fail to teach that the members have long and short elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the members of Bolton long and short since changing the size of an element is an example of a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Rose*. 105 USPQ 237, 240.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farquhar in view of Reynolds (USPN 4066366).

Farquhar teaches all the essential elements of the claimed invention, including that the members extend straight and are tied up in a bundle and mounted on a body (11) for holding the member. Farquhar however fails to teach that the body has a cleaning liquid passage for supplying cleaning liquid to the members and that the brush members comprise short and long elements.

With regards to claim 8, Reynolds teaches a mop that is attached to a water supply. It would have been obvious to one of ordinary skill in the art at the time the invention was made have a water supply to Farquhar's invention so that the mop would have a constant supply of clean water, without stopping the process of cleaning. With Farquhar's current invention, when more water is needed the cleaning process would stop and the mop would have to be dunked in a

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bucket of cleaning water. That bucket of cleaning water would eventually become dirty and then the mop would be using dirty water to clean the substrate.

With regards to claim 10, Farquhar in view of Reynolds teach all the essential elements of the claimed invention however fail to teach that the members have long and short elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the members of Farquhar long and short since changing the size of an element is an example of a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Rose*, 105 USPQ 237, 240.

Claims 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen (USPN 3750213) in view of Bolton et al.

Hansen teaches a substrate cleaning apparatus comprising a substrate cleaning tool (14) have a plurality of flexible members in a bundle. There is a scrub arm (46) for holding the substrate tool and a holder (12) for holding the substrate to be cleaned as. The holder holds the substrates wheels and hold them rotatably. The scrub arm is provided with a driving mechanism (figure 2, as shown by the arrows and col. 2, lines 7-15) for driving the tool up and down as well as rotating the tool. The drive mechanism is provided with an elevator shaft (42, 50). There is a cleaning liquid passage (60, 62) therethrough for supplying liquid to the substrate cleaning tool. Additionally, there is a nozzle (66) for ejecting a cleaning liquid for rinsing. Hansen teaches all the essential elements of the claimed invention however fails to teach that the flexible members comprise a hollow channel having a number of channels extending from the hollow channel and that the members are water-permeable.

Bolton teaches a cleaning tool comprising water-permeable cleaning members each having a hollow channel. Each member has a number of channels extending from the hollow channel since water permeable materials are not solid but have microscopic openings from one side to the other. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cleaning members of Bolton in place of the cleaning members on Hansen since the cleaning members of Bolton can provide improved cleaning properties and therefore require the use of less detergent or cleaning liquid during the cleaning process (col. 2, lines 15-17).

Claims 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen (USPN 3750213) in view of Farquhar.

Hansen teaches a substrate cleaning apparatus comprising a substrate cleaning tool (14) have a plurality of flexible members in a bundle. There is a scrub arm (46) for holding the substrate tool and a holder (12) for holding the substrate to be cleaned as. The holder holds the substrates wheels and hold them rotatably. The scrub arm is provided with a driving mechanism (figure 2, as shown by the arrows and col. 2, lines 7-15) for driving the tool up and down as well as rotating the tool. The drive mechanism is provided with an elevator shaft (42, 50). There is a cleaning liquid passage (60, 62) therethrough for supplying liquid to the substrate cleaning tool. Additionally, there is a nozzle (66) for ejecting a cleaning liquid for rinsing. Hansen teaches all the essential elements of the claimed invention however fails to teach that the flexible members comprise a hollow channel having a number of channels extending from the hollow channel and that the members are water-permeable.

Farquhar teaches a cleaning tool comprising water-permeable cleaning members each having a hollow channel. Each member has a number of channels extending from the hollow channel since water permeable materials are not solid but have microscopic openings from one side to the other. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cleaning members of Farquhar in place of the cleaning members on Hansen since the cleaning members of Farquhar can provide a structure capable of absorbing and retaining a vast amount of fluid. Furthermore, the structure of the members eliminates matting of the absorbent material and prevents the formation of knots or hard portions, which would tend to scratch or mar the surface being cleaned (col. 2, lines 97-107).

Response to Arguments

Applicant's arguments, see pages 4-6, filed 9/23/04, with respect to the rejection(s) of claim(s) 1, 3, 5, 7-8, 13-20 under Vail, claims 1, 3, 5, 7-8, 10, 13-19 under Hirose and claim 12 under Rohm have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bolton, Farquhar, Reynolds and Hansen. Bolton and Farquhar teach flexible thready water-permeable members that have a hollow channel.

Applicant's arguments with regard to Belan, filed 9/23/04 have been fully considered but they are not persuasive. Belan teaches a hairbrush with bristles that have a hollow channel. It is known in the art that hairbrushes have flexible bristles to prevent pulling or tangling of the hair. Therefore, the rejection of Belan is maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. By adding the limitation of "flexible" a further search was required. Additionally, by removing the terminology of "brush" from the claim, broadened the claims to incorporate more than just bristles. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb
11/10/04

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